

## EAST Search History

## EAST Search History (Prior Art)

| Ref # | Hits | Search Query  | DBs   | Default Operator | Plurals | Time Stamp          |
|-------|------|---|---|------------------|---------|---------------------|
| L3    | 3    | ("4058163").PN.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2009/11/03<br>16:41 |
| L4    | 2344 | ((166/380) or (166/285)<br>or (166/177.6) or<br>(166/177.7)).CQLS.  | US-PGPUB;<br>USPAT; USOCR   | OR               | OFF     | 2009/11/03<br>16:43 |
| L5    | 23   | ("2743083"   "2746721"<br>  "2780438"<br>  "3640351"   "3894818"<br>  "3899033"  <br>"3933209"   "3941196"<br>  "4027282"<br>  "4439318"   "4817739"<br>  "4819745"  <br>"4830122"   "4953595"<br>  "4979577"<br>  "5009272"   "5048622"<br>  "5190114"  <br>"5662180"   "6279670").<br>PN.   | US-PGPUB;<br>USPAT; USOCR   | ADJ              | ON      | 2009/11/03<br>16:43 |
| L6    | 34   | (US-20030168212-\$ or<br>US-20070187112-\$).did.<br>or (US-6279670-\$ or US-<br>7405998-\$ or US-<br>5190114-\$ or US-<br>5009272-\$ or US-<br>6691778-\$ or US-<br>6321836-\$ or US-<br>6053261-\$ or US-<br>3894818-\$ or US-<br>4890682-\$ or US-<br>7017681-\$ or US-<br>6571870-\$ or US-<br>6062324-\$ or US-<br>5582247-\$ or US-<br>4958691-\$ or US-<br>4462471-\$ or US-<br>7434623-\$ or US-<br>7219726-\$ or US-<br>7139219-\$ or US-<br>6736209-\$ or US-<br>6725923-\$ or US-<br>6637520-\$ or US-<br>6550534-\$ or US- | US-PGPUB;<br>USPAT; USOCR   | ADJ              | ON      | 2009/11/03<br>16:43 |

|    |      |   |   |     |     |                     |
|----|------|---|---|-----|-----|---------------------|
|    |      | 4630689-\$ or US-<br>4548281-\$ or US-<br>4384625-\$ or US-<br>3610347-\$).did. or (US-<br>5439290-\$ or US-<br>5361830-\$ or US-<br>7168494-\$ or US-<br>7044230-\$ or US-<br>5607017-\$).did. or (US-<br>2743083-\$).did.   |   |     |     |                     |
| L7 | 2    | "5439290".pn.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON  | 2009/11/03<br>17:34 |
| S1 | 2277 | ((166/380) or (166/285)<br>or (166/177.6) or<br>(166/177.7)).COLS.  | US-PGPUB;<br>USPAT; USOCR   | OR  | OFF | 2009/04/27<br>10:52 |
| S2 | 23   | ("2743083"   "2746721"<br>  "2780438"  <br>"3640351"   "3894818"<br>  "3899033"  <br>"3933209"   "3941196"<br>  "4027282"  <br>"4439318"   "4817739"<br>  "4819745"  <br>"4830122"   "4953595"<br>  "4979577"  <br>"5009272"   "5048622"<br>  "5190114"  <br>"5662180"   "6279670").<br>PN. | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON  | 2009/04/27<br>11:10 |
| S3 | 13   | ("2743083"   "2780438"<br>  "4819745"  <br>"4830122"   "4953595"<br>  "4979577"  <br>"5009272"   "5048622"<br>  "5190114").PN. OR<br>("6279670").URPN.  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON  | 2009/04/27<br>11:14 |
| S4 | 1    | (S2 or S3) and (gel\$4 or<br>gellation)   | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON  | 2009/04/27<br>11:21 |
| S5 | 25   | (S2 or S3)  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON  | 2009/04/27<br>11:22 |
| S6 | 3    | S5 and (downhole near<br>motor)   | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON  | 2009/04/27<br>11:22 |
| S7 | 2    | S6 and (rotary)   | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON  | 2009/04/27<br>11:22 |

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|-----|----|--|---|-----|----|---------------------|
| S8  | 3  | S5 and cement\$4   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>11:52 |
| S9  | 10 | S5 and friction  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>12:05 |
| S10 | 13 | S5 and pulse   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>13:51 |
| S11 | 4  | S10 and (positive or<br>negative)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>13:51 |
| S12 | 7  | S5 and shock and<br>(above or below)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>13:54 |
| S13 | 21 | S5 and (rotat\$4 or<br>transverse)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>14:01 |
| S14 | 2  | "6279670".pn.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>14:06 |
| S15 | 1  | S14 and (cement\$4 or<br>friction or gel\$4 or<br>gellation or axial\$4 or<br>rotat\$4 or surface or<br>weight or plural\$4 or<br>frequency or (pressure<br>near pulse) or<br>amplitude) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>14:11 |

|     |       |  |   |     |    |                     |
|-----|-------|--|---|-----|----|---------------------|
| S16 | 3     | S5 and cement\$4   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>14:35 |
| S17 | 52119 | (agitat\$4 or vibrat\$4 or<br>(pressure near pulse) or<br>(restrict\$4 near flow))<br>and (cement\$4)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>15:00 |
| S18 | 289   | (S1 or S2 or S3) and<br>S17  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>15:01 |
| S19 | 29    | S18 and (pressure near<br>pulse)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>15:02 |
| S20 | 125   | ("0701391"   "1748460"<br>  "20040011522"  <br>"20040156265"  <br>"20050061503"  <br>"2053982"   "2113396"<br>  "2287157"  <br>"2620162"   "2713472"<br>  "2743083"  <br>"2746721"   "2750154"<br>  "2780438"  <br>"2902258"   "3001322"<br>  "3029554"  <br>"3065805"   "3096833"<br>  "3105560"  <br>"3194325"   "3295837"<br>  "3307641"  <br>"3346058"   "3415330"<br>  "3416613"  <br>"3431984"   "3441094"<br>  "3568783"  <br>"3603410"   "3768576"<br>  "3807512"  <br>"3810602"   "3923099"<br>  "3958217"  <br>"4398769"   "4434863"<br>  "4520886"  <br>"4683951"   "4718490"<br>  "4807709"  <br>"4817739"   "4819745"<br>  "4830122"  <br>"4919204"   "4950201" | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/27<br>15:08 |

|     |    |  |   |     |    |                     |
|-----|----|--|---|-----|----|---------------------|
|     |    | "4953595"  <br>"4979577"   "5009272"<br>"5048622"  <br>"5190114"   "5297631"<br>"5484016"  <br>"5586602"   "5836389"<br>"6012521"  <br>"6241019"   "6279670"<br>"6318468"  <br>"6336502"   "6405796"<br>"6405797"  <br>"6460618"   "6619394"<br>"6691778"  <br>"6832655"   "6851473"<br>"7198105").PN. OR<br>("2743083"   "5009272"<br>"5190114"  <br>"6279670"   "7405998").<br>URPN. |   |     |    |                     |
| S21 | 24 | S20 and cement\$4  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/27<br>15:08 |
| S22 | 3  | (pressure near pulse)<br>near cement\$4  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/27<br>15:12 |
| S23 | 9  | (US-6279670-\$ or US-<br>7405998-\$ or US-<br>5190114-\$ or US-<br>5009272-\$ or US-<br>6691778-\$ or US-<br>6321836-\$ or US-<br>6053261-\$ or US-<br>3894818-\$).did. or (US-<br>2743083-\$).did.  | USPAT; USOCR  | ADJ | ON | 2009/04/27<br>15:49 |
| S24 | 9  | S23 and (retriev\$4 or<br>drill\$4 or soluble)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>15:50 |
| S25 | 4  | "4890682".pn. or<br>"2003168212".pn.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/27<br>16:44 |
| S26 | 1  | "4890682".pn. or<br>"2003168212".pn.   | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/27<br>16:44 |
| S27 | 36 | ivannikov.in.  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/27<br>16:45 |
| S28 | 2  | "4890682".pn. or<br>"20030168212".pn.  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/27<br>16:46 |
| S29 | 2  | S28 and cement\$4  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/27<br>16:47 |

|     |     |  |                           |     |    |                     |
|-----|-----|--|---------------------------|-----|----|---------------------|
| S30 | 1   | "6736209".pn.  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/27<br>16:48 |
| S31 | 9   | ("4462471"   "4702315"<br>  "4747466"  <br>"4958691"   "5582247"<br>  "5997172"  <br>"6062324"   "6571870").<br>PN. OR ("6736209").<br>URPN.   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/27<br>16:48 |
| S32 | 482 | ("0701391"   "1232800"<br>  "1654833"  <br>"1748460"   "1775673"<br>  "1934252"  <br>"20040011522"  <br>"20040156265"  <br>"20050061503"  <br>"2053982"   "2113396"<br>  "2187088"  <br>"2199969"   "2287157"<br>  "2620162"  <br>"2635852"   "2641445"<br>  "2644671"  <br>"2713472"   "2721056"<br>  "2738956"  <br>"2743083"   "2746721"<br>  "2750154"  <br>"2755069"   "2780438"<br>  "2800884"  <br>"2806533"   "2868511"<br>  "2902258"  <br>"2942851"   "3001322"<br>  "3029554"  <br>"3065805"   "3096833"<br>  "3105560"  <br>"3139933"   "3149685"<br>  "3193027"  <br>"3194325"   "3213941"<br>  "3235014"  <br>"3262507"   "3295837"<br>  "3307641"  <br>"3318397"   "3346058"<br>  "3353362"  <br>"3361220"   "3365202"<br>  "3368632"  <br>"3392795"   "3415330"<br>  "3416487"  <br>"3416613"   "3425499"<br>  "3431984"  <br>"3433311"   "3441094"<br>  "3452830"  <br>"3456746"   "3477237"<br>  "3509948"  <br>"3520362"   "3532174"<br>  "3544075"  <br>"3562807"   "3564932"<br>  "3568783" | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/27<br>16:49 |

"3570611" | "3578081"  
| "3603410" |  
"3610347" | "3616703"  
| "3633688" |  
"3648769" | "3682258"  
| "3718205" |  
"3743017" | "3768576"  
| "3783954" |  
"3800889" | "3804185"  
| "3807512" |  
"3807513" | "3808820"  
| "3810602" |  
"3853187" | "3860902"  
| "3898815" |  
"3920083" | "3923099"  
| "3926267" |  
"3946819" | "3958217"  
| "3978931" |  
"3987858" | "4018290"  
| "4058163" |  
"4111271" | "4186807"  
| "4209070" |  
"4236580" | "4252189"  
| "4252210" |  
"4257482" | "4280557"  
| "4291395" |  
"4295535" | "4299279"  
| "4342364" |  
"4384625" | "4398769"  
| "4402495" |  
"4403665" | "4429743"  
| "4434863" |  
"4436452" | "4462471"  
| "4471838" |  
"4509593" | "4512401"  
| "4520886" |  
"4544031").PN. OR  
("4548281" | "4553443"  
| "4557295" |  
"4613003" | "4630689"  
| "4640360" |  
"4658897" | "4667742"  
| "4671379" |  
"4673037" | "4683951"  
| "4702315" |  
"4702325" | "4702343"  
| "4716555" |  
"4718490" | "4722417"  
| "4747466" |  
"4783771" | "4788467"  
| "4805725" |  
"4805727" | "4807709"  
| "4815328" |  
"4815557" | "4817712"  
| "4817739" |  
"4819745" | "4824258"  
| "4830122" |

|     |     |  |                           |     |    |                     |
|-----|-----|--|---------------------------|-----|----|---------------------|
|     |     | <p>"4874061"   "4890682"<br/>  "4905778"  <br/>"4913234"   "4919204"<br/>  "4950201"  <br/>"4953595"   "4954998"<br/>  "4958691"  <br/>"4979577"   "4979829"<br/>  "4991685"  <br/>"5007479"   "5009272"<br/>  "5048622"  <br/>"5121363"   "5156223"<br/>  "5159160"  <br/>"5190114"   "5229552"<br/>  "5229554"  <br/>"5234056"   "5297631"<br/>  "5321213"  <br/>"5361830"   "5484016"<br/>  "5505262"  <br/>"5515918"   "5562170"<br/>  "5586602"  <br/>"5595243"   "5595244"<br/>  "5722495"  <br/>"5803182"   "5836389"<br/>  "5871277"  <br/>"5957220"   "5997172"<br/>  "6009047"  <br/>"6009948"   "6012521"<br/>  "6062324"  <br/>"6152222"   "6241019"<br/>  "6279670"  <br/>"6318468"   "6336502"<br/>  "6405796"  <br/>"6405797"   "6460618"<br/>  "6619394"  <br/>"6691778"   "6702204"<br/>  "6705396"  <br/>"6725923"   "6736209"<br/>  "6832655"  <br/>"6851473"   "7198105").<br/>PN. OR<br/>("2003/0168212"  <br/>"2743083"   "3894818"<br/>  "4462471"  <br/>"4890682"   "4958691"<br/>  "5009272"  <br/>"5190114"   "5582247"<br/>  "6053261"  <br/>"6062324"   "6279670"<br/>  "6321836"  <br/>"6571870"   "6691778"<br/>  "7017681"  <br/>"7405998").URPN.</p> |                           |     |    |                     |
| S33 | 350 | S32 not (S31 or S20)   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/27<br>16:49 |



|     |    |  |                           |     |    |                     |
|-----|----|--|---------------------------|-----|----|---------------------|
| S34 | 28 | (US-20030168212-\$).<br>did. or (US-6279670-\$<br>or US-7405998-\$ or US-<br>5190114-\$ or US-<br>5009272-\$ or US-<br>6691778-\$ or US-<br>6321836-\$ or US-<br>6053261-\$ or US-<br>3894818-\$ or US-<br>4890682-\$ or US-<br>7017681-\$ or US-<br>6571870-\$ or US-<br>6062324-\$ or US-<br>5582247-\$ or US-<br>4958691-\$ or US-<br>4462471-\$ or US-<br>7434623-\$ or US-<br>7219726-\$ or US-<br>7139219-\$ or US-<br>6736209-\$ or US-<br>6725923-\$ or US-<br>6637520-\$ or US-<br>6550534-\$ or US-<br>4630689-\$ or US-<br>4548281-\$ or US-<br>4384625-\$ or US-<br>3610347-\$).did. or (US-<br>2743083-\$).did. | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/27<br>17:01 |
| S35 | 16 | S34 and cement.\$4   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/27<br>17:01 |
| S36 | 28 | (US-20030168212-\$).<br>did. or (US-6279670-\$<br>or US-7405998-\$ or US-<br>5190114-\$ or US-<br>5009272-\$ or US-<br>6691778-\$ or US-<br>6321836-\$ or US-<br>6053261-\$ or US-<br>3894818-\$ or US-<br>4890682-\$ or US-<br>7017681-\$ or US-<br>6571870-\$ or US-<br>6062324-\$ or US-<br>5582247-\$ or US-<br>4958691-\$ or US-<br>4462471-\$ or US-<br>7434623-\$ or US-<br>7219726-\$ or US-<br>7139219-\$ or US-<br>6736209-\$ or US-<br>6725923-\$ or US-<br>6637520-\$ or US-<br>6550534-\$ or US-<br>4630689-\$ or US-<br>4548281-\$ or US-<br>4384625-\$ or US-   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>10:11 |

|     |    |  |   |     |    |                     |
|-----|----|--|---|-----|----|---------------------|
|     |    | 3610347-\$).did. or (US-2743083-\$).did.   |   |     |    |                     |
| S37 | 15 | S36 and frequency and (amplitude or magnitude)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/28<br>10:12 |
| S38 | 9  | S37 and cement\$4  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/28<br>10:12 |
| S39 | 3  | "3557875".pn.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/28<br>10:18 |
| S40 | 2  | S39 and cement\$4  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/28<br>10:18 |
| S41 | 2  | S40 and rotat\$4   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/28<br>10:34 |
| S42 | 0  | S41 and motor  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2009/04/28<br>10:35 |
| S43 | 41 | ("1676785"   "2072982"<br>  "2309791"  <br>"2730176"   "3049189"<br>  "3205945"  <br>"3209833"   "3239005"<br>  "3302714"  <br>"3335801"   "3360056").<br>PN. OR ("3557875").<br>URPN. | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/28<br>10:48 |
| S44 | 29 | S43 and cement\$4  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/28<br>10:50 |
| S45 | 6  | S44 and pulse  | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2009/04/28<br>10:50 |

|     |         |   |                           |     |    |                     |
|-----|---------|---|---------------------------|-----|----|---------------------|
| S46 | 1       | "5439290".pn. and vibrat\$4 and cement\$4 and pulse   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>10:52 |
| S47 | 1       | "6279670".pn. and pulse   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>11:15 |
| S48 | 5       | S36 and negative and positive   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>11:36 |
| S49 | 1       | "6279670".pn. and shock   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>12:39 |
| S50 | 13      | (S36 or S39 or S43) and cement\$4 and pulse   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>12:56 |
| S51 | 13      | (S36 or S39 or S43) and cement\$4 and pulse and (drill\$4 or mill\$4)                                     | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>12:57 |
| S52 | 113283  | (negative near pulse) or (decreas\$4 near (pressure or pulse))  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>13:00 |
| S53 | 1266    | S52 same (cement\$4 or annulus)   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>13:00 |
| S54 | 2       | (S36 or S39 or S43) and S53   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>13:00 |
| S55 | 1303204 | (dissolv\$4 or soluble or solubility)   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:12 |
| S56 | 1       | (S36 or S39 or S43) and S55   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:12 |
| S57 | 63917   | S55 and vibrat\$4   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:13 |
| S58 | 566     | S57 and ("175".clas. or "166".clas.)  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:13 |
| S59 | 331     | S58 and cement\$4   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:13 |
| S60 | 2960    | (dissolv\$4 or soluble or solubility) near (tool or device or apparatus or agitator or vibrator or drill) | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:14 |
| S61 | 187     | S60 and cement\$4   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:14 |
| S62 | 27      | S61 and ("175".clas. or "166".clas.)  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:14 |

|     |      |  |                           |     |    |                     |
|-----|------|--|---------------------------|-----|----|---------------------|
| S63 | 23   | ("2743083"   "2746721"   "2780438"   "3640351"   "3894818"   "3899033"   "3933209"   "3941196"   "4027282"   "4439318"   "4817739"   "4819745"   "4830122"   "4953595"   "4979577"   "5009272"   "5048622"   "5190114"   "5662180"   "6279670"). PN.                     | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:17 |
| S64 | 1    | S63 and (dissolv\$4 or soluble)  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:17 |
| S65 | 37   | S60 and ("175".clas. or "166".clas.)   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:20 |
| S66 | 7    | eddison.in. and (soluble or dissolv\$4 or chemical)  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:22 |
| S67 | 1564 | (robertson or innes).in. and (soluble or dissolv \$4 or chemical)  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:23 |
| S68 | 1551 | S67 not (wellbore or (well near bore))   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:24 |
| S69 | 13   | S67 not S68  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:24 |
| S70 | 1    | "5607017".pn.  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:33 |
| S71 | 23   | ("3141513"   "3164206"   "3208530"   "3420299"   "5479986"). PN. OR ("5607017"). URP.N.  | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:33 |
| S72 | 22   | ("20020096365"   "20030168214"   "20030188871"   "2152306"   "2261292"   "3099318"   "4262702"   "4286629"   "4432419"   "4678037"   "4688641"   "4834184"   "5224540"   "5271468"   "5607017"   "5709269"   "6095247"   "6328110"   "6397950").PN. OR ("7044230").URPN. | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:34 |
| S73 | 1    | S70 and dissolv\$4   | US-PGPUB;<br>USPAT; USOCR | ADJ | ON | 2009/04/28<br>14:50 |

|     |     |  |                        |     |     |                  |
|-----|-----|--|------------------------|-----|-----|------------------|
| S74 | 17  | (S36 or S39 or S43) and (pulse or pulsation) | US-PGPUB; USPAT; USOCR | ADJ | ON  | 2009/04/28 15:03 |
| S75 | 13  | S74 and cement\$4                            | US-PGPUB; USPAT; USOCR | ADJ | ON  | 2009/04/28 15:03 |
| S76 | 41  | (S36 or S39 or S43) and frequency            | US-PGPUB; USPAT; USOCR | ADJ | ON  | 2009/04/28 15:15 |
| S77 | 22  | (S36) and frequency                          | US-PGPUB; USPAT; USOCR | ADJ | ON  | 2009/04/28 15:15 |
| S78 | 1   | "10576884"                                   | US-PGPUB; USPAT; USOCR | ADJ | ON  | 2009/04/28 15:32 |
| S79 | 235 | ((166/177.6) or (166/177.7)).CCLS.           | US-PGPUB; USPAT; USOCR | OR  | OFF | 2009/04/28 15:34 |

**EAST Search History (Interference)**

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**11/ 3/ 2009 5:50:55 PM****C:\Documents and Settings\egottlieb\My Documents\EAST\Workspaces\ 10576884.wsp**